

1 (c) a transparent flexible envelope that extends over the plurality of solid-state
2 light emitting devices, providing protection against abrasion, the light emitted by the plurality of
3 solid-state light emitting devices passing through the transparent flexible envelope, said transparent
4 flexible envelope not covering the rear surface of the flexible substrate, so that the rear surface of the
5 flexible substrate is adapted to mount on an exterior surface of a vehicle, said flexible substrate, said
6 spaced-apart array, and said transparent flexible envelope being able to conform to a non-planar
7 curve of the exterior surface.

8 13. (Twice Amended) A flexible light emitting panel for application to an exterior surface of
9 a vehicle, comprising:

10 (a) a flexible substrate sized and shaped to cover a selected portion of an exterior
11 surface of a vehicle, said flexible substrate including a positive flexible conductive trace and a
12 negative flexible conductive trace, each flexible conductive trace being adapted to couple to an
13 electrical system of a vehicle to receive an electrical current;

14 (b) a plurality of solid-state light emitting devices mounted on at least a defined
15 portion of an outer surface of the flexible substrate in a spaced-apart array extending in two
16 orthogonal directions, an anode of each solid-state light emitting device being electrically connected
17 to the positive flexible conductive trace and a cathode of each solid-state light emitting device being
18 electrically connected to the negative flexible conductive trace so that an electrical current conveyed
19 thereby is applied to energize each of the plurality of solid-state light emitting devices, the plurality
20 of solid-state light emitting devices so energized thereby emitting light outwardly and away from said
21 flexible substrate;

22 (c) a flexible protective, generally light transmitting cover overlying said plurality
23 of solid-state light emitting devices, but not overlying a rear surface of said flexible substrate, said
24 flexible substrate on which the solid-state light emitting devices are mounted and said flexible
25 protective cover comprising a flexible panel that is adapted to be affixed to and conform to the
26 exterior surface of a vehicle, even though the exterior surface is non-planar, producing light when the
27 solid-state light emitting devices are energized by the electrical current.

28 23. (Twice Amended) A method for providing external lighting for a vehicle, comprising the
29 steps of:

30 (a) providing a flexible substrate having an electrical conductor adapted to couple
31 to a source of electrical power on a vehicle, said flexible substrate having an upper surface and a
32 lower surface, the electrical conductor being disposed in at least one of the following locations:

- 33 (i) on the lower surface of the flexible substrate;
34 (ii) on the upper surface of the flexible substrate; and
35 (iii) within an internal portion of the flexible substrate;

1 (b) mounting a plurality of solid-state light emitting devices in a spaced-apart
2 array on the upper surface of the flexible substrate, so that the plurality of solid-state light emitting
3 devices are coupled to the electrical conductor, light emitted from the plurality of light sources when
4 they are energized being directed outwardly and away from the flexible substrate;

5 (c) protecting the plurality of solid-state light emitting devices with a flexible, generally
6 light transmissive cover that overlies the array of solid-state light emitting devices and also conforms to the
7 exterior, so that the flexible cover does not overlie the lower surface of the flexible substrate; and

8 (d) attaching the lower surface of the flexible substrate to an external surface of
9 the vehicle, so that the flexible substrate and the flexible generally light transmissive cover conform
10 to even a non-planar shape of the external surface.

11 25. (Amended) A multi-layered flexible vehicular light source adapted to mount on and
12 conform to a shape of an external surface of a vehicle and to emit light that provides illumination of a
13 surface over which the vehicle is traveling, indicates an intention of a driver to turn or stop the
14 vehicle, and/or provides an indication of a location of the vehicle, said flexible vehicular light source
15 comprising:

16 (a) a first flexible layer comprising a flexible substrate having a rear surface, a
17 front surface, and a plurality of edge surfaces, such that a surface area of both said rear surface and
18 said front surface are each individually substantially larger than a surface area of any of said edge
19 surfaces, said flexible substrate including a plurality of flexible conductive traces, said plurality of
20 flexible conductive traces being adapted to connect to an electrical system of a vehicle to receive an
21 electrical current therefrom;

22 (b) a second flexible layer comprising a plurality of solid-state light emitting devices
23 mounted in a spaced-apart array on the front surface of the flexible substrate, said array extending in two
24 orthogonal directions, said plurality of solid-state light emitting devices being electrically connected to the
25 plurality of flexible conductive traces and energized by the electrical current, thereby emitting light
26 outwardly and away from the front surface of the flexible substrate; and

27 (c) a third flexible layer comprising a transparent flexible envelope that extends
28 over the plurality of solid-state light emitting devices, and which does not cover the rear surface of
29 the flexible substrate, providing protection against abrasion, the light emitted by the plurality of
30 solid-state light emitting devices passing through the transparent flexible envelope, each flexible
31 layer having sufficient flexibility that when all three flexible layers are combined to achieve the
32 multi-layered flexible vehicular light source, the resulting multi-layered flexible vehicular light
33 source is sufficiently flexible to conform to a substantially non-planar surface.

34 26. (Amended) A multi-layered flexible vehicular light source adapted to mount on and conform
35 to a shape of an external surface of a vehicle and to emit light that provides illumination of a surface over

1 which the vehicle is traveling, indicates an intention of a driver to turn or stop the vehicle, and/or provides
2 an indication of a location of the vehicle, said flexible vehicular light source comprising:

3 (a) a first flexible layer comprising a flexible substrate having a rear surface, a front
4 surface, and a plurality of edges, such that a surface area of both said rear surface and said front surface
5 are each individually substantially larger than a surface area of any of said edges, said flexible substrate
6 including a plurality of flexible conductive traces, said plurality of flexible conductive traces being
7 adapted to connect to an electrical system of a vehicle to receive an electrical current therefrom;

8 (b) a second flexible layer comprising a plurality of solid-state light
9 emitting devices mounted in a high density array on the front surface of the flexible substrate, said
10 high density array having a size and shape substantially similar to a size and shape of the front
11 surface of the flexible substrate, such that substantially all of the front surface of the flexible substrate
12 is covered by the plurality of solid-state light emitting devices, the plurality of solid-state light
13 emitting devices being electrically connected to the plurality of flexible conductive traces and energized
14 by the electrical current, emitting light outwardly and away from the front surface of the flexible
15 substrate; and

16 (c) a third flexible layer comprising a transparent flexible envelope that
17 extends over the plurality of solid-state light emitting devices, but which does not cover the rear
18 surface of the flexible substrate, providing protection against abrasion, the light emitted by the
19 plurality of solid-state light emitting devices passing through the transparent flexible envelope,
20 each flexible layer having sufficient flexibility that when all three flexible layers are combined to
21 achieve the multi-layered flexible vehicular light source, the resulting multi-layered flexible
22 vehicular light source is sufficiently flexible to be able to conform to a substantially non-planar
23 surface.

24 REMARKS

25 Status of the Claims

26 Claims 1-26 are now pending in the present application. Claims 1, 13, 23, 25, and 26 have
27 been amended to more clearly distinguish over the prior art.

28 Claims Rejected Under 35 U.S.C. § 103(a)

29 The Examiner has rejected Claims 1-8, 12, and 23-26 under 35 U.S.C. § 103(a) as being
30 unpatentable over Parker (U.S. Patent No. 5,895,115), in view of Goodrich (U.S. Patent
31 No. 5,162,696). The Examiner appears to indicate that Parker discloses each element of applicants'
32 claimed invention, except for an array of light sources mounted to an upper surface of the flexible
33 substrate so that light is emitted outwardly and away from the flexible substrate. The Examiner
34 further indicates that Goodrich discloses a structure similar to the recited array, and noting that
35 because Parker and Goodrich are analogous art, the Examiner concludes that it would have been